KEYSHEY
MONTREAL

2

Profile. Decks & B'hds.

Smiths Dock Co.

837 · 8 · 9.

T.C. 30/11/27. 24 - 10 - 27.

837. Deepwater. now Hamildoc * *

838 Clearwater. now "Trenora"

839. Stillwater. now Keymont

004900-004905-0121

Nos 837, 8 & 9.

PROFILE & DECK PLANS.

DIMENSIONS :- 253'-0" × 43'-4 EXT. × 20'-6" MLD. DEPTH.

SCALE 1/8" = 1 FOOT.

TO CLASS B.S* FOR SERVICE ON GREAT LAKES & GULF OF ST. LAWRENCE

TO HAVE A DRAFT OF 16'-0" IN THE GULF.

NOTE :- SCANTLINGS ARE TO N.B.S. SECTIONS FOR 8", 9" & 10" B.As ONLY.

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT MIDDLESBROUGH

J.W.S. 20-10-27

SMITH'S DOCK Co. LTD.
PRINT No. 1178
DATE 20/10/27
SHIPBUILDING YARD
SOUTH BANK ON TEES

21 OCT 1927

Approved
20/10/27

AFTER DECKHOUSE

SIDES & ENDS ·25 THICK
TOP ·25 "
SIDE STIFFS 3½ × 2½ × ·28 @ 30" staggered @ deck or partial bulkheads as necessary
BEAMS 3½ × 2½ × ·26.

BOAT DECK
ACCOM.
WINCH
CASING SIDES
ENGINE CASING
BOILER CASING
COAMING 24" × ·44
WHEEL HOUSE
CAPTAIN'S HOUSE
WINDLASS
F'CLE DK.
CREW ACCOMMODATION
2½" DIA PILLARS 2 ROWS.
CHAIN LOCKER
2 WINCHES
UPPER DK.
10" × 3½" × ·40 B.A. RUNNER ON ℄, 7'-6" P&S, & 15'-0" P&S.
B.H.
5" angle
T.T
Connection of Intermediate frames & Tank Top when no beam.
See modified arrangement
ENGINE ROOM
BOILER
WATER BALLAST
WATER BALLAST No 3
WATER BALLAST No 2
WATER BALLAST No 1
STRINGER
1/2 LENGTH
3/5 LENGTH
FRAMES 9" × 3" × 36 B.A.
UPPER DECK
CARGO HATCH
ENGINE CASING
BOILER CASING
BEAMS 5" × 3" × ·30 O.A.
1/2 BEAMS 5" × 3" × ·30 O.A.
STRONG BEAMS 5" × 3" × ·35 O.A.
1/2 BEAMS
BEAM ON EVERY FRAME
Hatch End Beams. 6 × 3 × ·44 o.a.
BKT
STRONG BEAM
DECK LUGS 3" × 3" × ·35 SINGLE.
VERT. LUGS 3" × 3" × ·30 SINGLE
HATCH COAMING
3" LAP ON BEAM
6 × 3 × ·30 LUG
·35 PLATE
5 × 5" × ·35
FLANGE
12" × 3½" × ·50 B.A. FACE BAR ON STRONG BEAM. 3" × 3" × ·35 LUG.
10" DIAM. HOLE FOR STEAM PIPES WHERE NECESSARY.
DETAIL OF BRACKETS BETWEEN HATCHES
SCALE ½" = 1 FOOT
See Fly plan for Brackets at Hatch Sides.
FORECASTLE DECK
STRINGER
STIFFS TAKE 1 RIVET THRO' DECK BAR.
UPPER DK.
WASH PLATE
BKT
36" × ·32 SEMI-BOX BEAM
36" × ·34 SEMI-BOX BEAM
PLTG. ·39
20" BKTS ·40
·30 BKTS AS SHEWN
15'-0" P&S.
10'-0" P&S
5'-0" P&S
8" × 3" × ·35 B.A. HORIZ
·36 WITH ·36 DOUBLING.
Floor ·38

W.T. AFTER PEAK BULKHEAD FR. 5
VERT. STIFFS 24" APART.
CLOSER SPACING OF RIVETS AT ENDS IN LIEU OF KNEES.
FRAME 3½" × 3½" × ·46 SINGLE
BEAM 3½" × 3" × ·36 SINGLE

NON. W/T. STEEL BUNKER BHD FR. 28
FRAME 3" × 3" × ·36 SINGLE
BEAM 3" × 3" × ·36 SINGLE

W.T. BHD FRS. 33 & 36 & CRANKED AT 15'-0" P&S OFF ℄ AT FR. 33-36.
3½" × 3½" × ·40 SINGLE FRAME
3" × 3" × ·36 SINGLE BEAM.

FORE PEAK BULKHEAD FR 117.
VERT. STIFFS 6" × 3" × ·42 B.A. SPACED 26" APART
RIVS CLOSER SPACED AT ENDS IN LIEU KNEES
FRAME 3½" × 3½" × ·44 SINGLE
BEAM 3½" × 3" × ·36 SINGLE
SEAMS & BUTTS SINGLE RIVETED.

5 × 3 × ·30 o.a. spaced 21"
or 6 × 3 × ·32 o.a. spaced 42"

STEEL DIVISIONAL BULKHEADS FRS. 60 & 84.
W.T. FOR 8'-0" ABOVE T. TOP. FR. 60 ONLY
STIFFS 6" × 3" × ·31 B.A. SPACED 30" APART ? brackets at bottom
PLATING ·26 THICK
FRAME 3½" × 3½" × ·38 SINGLE
BEAM 3" × 3" × ·36 SINGLE.

SMITH'S DOCK Co. LTD.
SHIPBUILDERS & ENGINEERS
SOUTH BANK ON TEES.

004900-004905-0121

1

Midship Section

Smith's Dock Co.

837 · 8 · 9.

T.C. 30/11/27. 24 - 10 - 27.

837. Deepwater. now Hamildoc ✱

838. Clearwater. now "Irenora"

839. Stillwater. now Keybolt

004900-004905-0120

Bag

004900-004905-0120

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Lloyd's Register
Foundation

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT MIDDLESBROUGH

20.10.27

21 OCT. 1927

GLASGOW

Approved

24.10.27

LAKE STEAMERS.

MIDSHIP SECTION.

DIMENSIONS :- 253'-0" B.P × 43'-4" EXT × 20'-6" MLD

TO CLASS B.S.* FOR SERVICE ON GREAT LAKES & GULF OF ST LAWRENCE

TO HAVE A DRAFT OF 16'-0" IN THE GULF.

SCALE 1/2" = 1 FOOT.

1177
20.10.27

C Nº
$\frac{253 \times 43.16 \times 20.5 \times .75}{100} = 1679$
$\frac{37.0 \times 43.16 \times 7.0 \times .50}{100} = 56$
$\frac{48.0 \times 30 \times 6.5 \times .50}{100} = 47$
1782

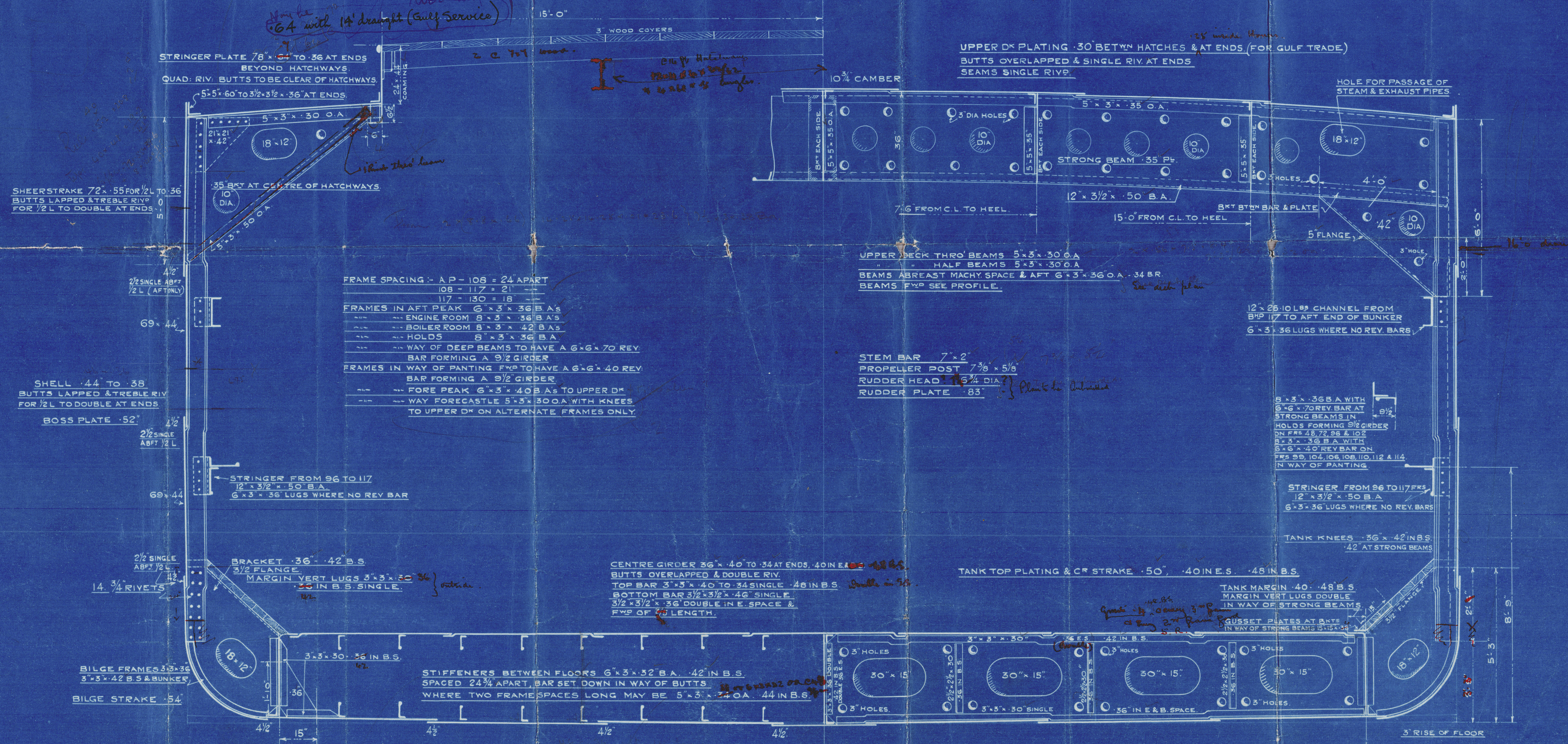
EQUIPMENT.

2 BOWER ANCHORS STOCKLESS EACH 36 CWT.
1 STREAM ANCHOR EX. STOCK 1 1/4 —"—
210 FTHS 1 11/16" STUD CHAIN CABLE.
75 —"— 3 1/2" STEEL STREAM WIRE.
105 —"— 3 1/2" —"— WIRE TOWLINE.
2-90 —"— 6 1/2" HAWSERS
2-90 —"— 5" —"—

FORECASTLE.

BEAMS 8"×3"×.35 B.A ON ALT FRS.
DECK PLATING .30"
SIDE PLATING .32"
BEAM KNEES 21"×.40". 5, 3/4 RIVS
SEE PROFILE FOR BEAMS AT ENDS.

See deck Plans.



May be .64 with 14' draught (Gulf Service)
Not adopted
15'-0"
3" WOOD COVERS
2 C 7×7 wood.
STRINGER PLATE 78"×~~.64~~ TO .36 AT ENDS BEYOND HATCHWAYS.
QUAD: RIV: BUTTS TO BE CLEAR OF HATCHWAYS.
5"×5"×.60" TO 3 1/2×3 1/2×.36" AT ENDS.
24"×.44" COAMING
6 1/2"
6"
5"×3"×.30 O.A.
21"×21"×.42"
18"×12"
Girder through beam
.35" BKT AT CENTRE OF HATCHWAYS.
10" DIA.
5"×3"×.50 O.A.
SHEERSTRAKE 72"×.55" FOR 1/2L TO .36" BUTTS LAPPED & TREBLE RIVD FOR 1/2L TO DOUBLE AT ENDS.
5'-0"
4 1/2"
2 1/2 SINGLE ABFT 1/2L (AFT ONLY)
69×.44"
SHELL .44" TO .38 BUTTS LAPPED & TREBLE RIV FOR 1/2L TO DOUBLE AT ENDS
BOSS PLATE .52"
4 1/2"
2 1/2 SINGLE ABFT 1/2L
STRINGER FROM 96 TO 117 12"×3 1/2"×.50" B.A. 6"×3"×.36" LUGS WHERE NO REV BAR
69×.44"
2 1/2" SINGLE ABFT 1/2L
14. 3/4" RIVETS
BRACKET .36" - .42" B.S. 3/2 FLANGE.
MARGIN VERT LUGS 3"×3"×~~.30~~ .36" ~~.36~~ .42 IN B.S. SINGLE. outside.
BILGE FRAMES 3"×3"×.36" 3"×3"×.42 B.S & BUNKER
BILGE STRAKE .54"
18"×12"
3"×3"×.30 - ~~.36~~ .42 IN B.S.
1'-10"
.36"
4 1/2"
15"
4 1/2"
4 1/2"
4 1/2"
10 3/4" CAMBER.
BKT EACH SIDE 5"×5"×.35 O.A.
36"
3" DIA HOLES
10" DIA
5"×5"×.35"
5"×3"×.35 O.A.
STRONG BEAM .35" PL.
HOLE FOR PASSAGE OF STEAM & EXHAUST PIPES.
18"×12"
3 HOLES
4'-0"
12"×3 1/2"×.50" B.A.
7'-6" FROM C.L. TO HEEL.
15'-0" FROM C.L. TO HEEL
BKT BTWN BAR & PLATE
.42"
10 DIA
5" FLANGE
3" HOLE
6'-0"
2'-0"
16'0" draught
12"×26.10 LBS CHANNEL FROM BHD 117 TO AFT END OF BUNKER 6"×3"×.36 LUGS WHERE NO REV. BARS
8"×3"×.36 B.A WITH 6"×6"×.70 REV. BAR AT STRONG BEAMS IN HOLDS FORMING 9 1/2 GIRDER ON FRS 48, 72, 96 & 102 8"×3"×.36 B.A WITH 6"×6"×.40" REV BAR ON FRS 99, 104, 106, 108, 110, 112 & 114 IN WAY OF PANTING.
9 1/2"
STRINGER FROM 96 TO 117 FRS 12"×3 1/2"×.50 B.A 6"×3"×.36" LUGS WHERE NO REV. BARS
TANK KNEES .36"×.42" IN B.S. .42" AT STRONG BEAMS
TANK MARGIN .40". .48" B.S MARGIN VERT LUGS DOUBLE IN WAY OF STRONG BEAMS.
GUSSET PLATES AT BKTS IN WAY OF STRONG BEAMS 15×15×.36
15"
3 1/2" FLANGE
8'-9"
5'-3"
2'-6"
3'-3"
3" RISE OF FLOOR
3"×3"×.30"
.36 E.S. (double)
.42 IN B.S.
3" HOLES
30"×15"
3"×3"×.36 DOUBLE .42 IN B.S DOUBLE .36 E.S.
2 1/2"×2 1/2"×.30" .36 IN B.S.
3"×3"×.30 SINGLE
.36" IN E & B. SPACE.
18"×12"
18'-6"

UPPER DK PLATING .30" BETWN HATCHES & .28 inside Hatches AT ENDS. (FOR GULF TRADE)
BUTTS OVERLAPPED & SINGLE RIV. AT ENDS
SEAMS SINGLE RIVD.

FRAME SPACING :- A.P - 108 = 24" APART
108 - 117 = 21" —"—
117 - 130 = 18" —"—
FRAMES IN AFT PEAK 6"×3"×.36 B.A's
—"— —"— ENGINE ROOM 8"×3"×.36" B.A's
—"— —"— BOILER ROOM 8"×3"×.42" B.A's
—"— —"— HOLDS 8"×3"×.36 B.A
—"— —"— WAY OF DEEP BEAMS TO HAVE A 6"×6"×.70 REV. BAR FORMING A 9 1/2 GIRDER
FRAMES IN WAY OF PANTING FWD TO HAVE A 6"×6"×.40 REV. BAR FORMING A 9 1/2" GIRDER.
—"— —"— FORE PEAK 6"×3"×.40" B.A's TO UPPER DK
—"— —"— WAY FORECASTLE 5"×3"×.30 O.A. WITH KNEES TO UPPER DK ON ALTERNATE FRAMES ONLY.

UPPER DECK THRO' BEAMS 5"×3"×.30" O.A
" " HALF BEAMS 5"×3"×.30" O.A
BEAMS ABREAST MACHY. SPACE & AFT 6"×3"×.36" O.A. .34 B.R.
BEAMS FWD SEE PROFILE.
See deck plan

STEM BAR 7"×2"
PROPELLER POST 7 3/8"×5 1/8"
RUDDER HEAD 6 3/4 DIA.
RUDDER PLATE .83"
Plan to be submitted

CENTRE GIRDER 36"×.40" TO .34 AT ENDS, .40 IN E.~~&B.S.~~ .48 B.S.
BUTTS OVERLAPPED & DOUBLE RIV.
TOP BAR 3"×3"×.40" TO .34 SINGLE .48 IN B.S. Double in B.S.
BOTTOM BAR 3 1/2"×3 1/2"×.46" SINGLE
3 1/2"×3 1/2"×.36" DOUBLE IN E. SPACE &
FWD OF 1/2 LENGTH.

TANK TOP PLATING & CR STRAKE .50", .40 IN E.S. .48 IN B.S.

Gussets .48 B.S. every 3rd frame & every 2nd frame fwd S.R.

STIFFENERS BETWEEN FLOORS 6"×3"×.32" B.A. .42" IN B.S.
SPACED 24 3/4" APART, BAR SET DOWN IN WAY OF BUTTS.
WHERE TWO FRAME SPACES LONG MAY BE 5"×3"×~~.34~~ O.A. .44 IN B.S.

BOTTOM PLATING .45" TO .38 AFT .45 FWD.
BUTTS LAPPED & TREBLE RIV. FOR 1/2 L TO DOUBLE AT ENDS.

KEEL PLATE 42"×.60"
TO .52" FORD
TREBLE RIVD OVERLAPPED BUTTS.

SOLID FLOORS EVERY 3RD FRAME (SEE PROFILE)
FLOORS .30 IN HOLDS .36 ~~UNDER BOILERS~~ E.S. Solid every frame .42" ~~BOILER~~ BRS .45 Boiler Bearers.

MESSRS SMITHS DOCK Cº LTD,
SHIPBUILDERS & ENGINEERS,
SOUTH BANK-ON-TEES,
ENGLAND.

Nºs 837-8 & 9.

3

Rudder & Sternframe.

Smiths Dock Co.

837-8-9.

26-10-27.

HAMILDOC *

837. Deepwater. now Hamilton

838 Clearwater. now "Trenora"

839. Stillwater. now Keymont

004900-004905-0122

BRITISH CORPORATION REGISTER
OF SHIPPING AND AIRCRAFT
MIDDLESBROUGH

SHIP Nos 837-8-9

STERN AND RUDDER FRAMES.

SCALE 1/2" = 1 FT.

OF FORGED STEEL TO PASS BRITISH CORPORATION TESTS.

TO CLASS B.S. ✳ FOR SERVICE ON THE GREAT LAKES AND GULF OF ST. LAWRENCE c 16 ft draught.

AREA ABAFT ℄ OF STOCK = 75·08 ☐' AREA FWD. ℄ OF STOCK = 21·73 ☐' SPEED 9 KNOTS.

C.G ABAFT ℄ OF STOCK = 1·99 FT. C.G. ABOVE BASE LINE 7·61 FT.

16'-0" Draught

SMITH'S DOCK Co. LTD.
PRINT No. 1190
DATE 23/10/27
SHIPBUILDING YARD
SOUTH BANK, MIDDLESBROUGH

26 OCT 1927

Approved 26.10.27

NOTE:-
ALL MACHINING & DRILLING TO BE DONE BY MAKERS
FRAME NOT TO BE PAINTED BUT HAVE ONE COAT OF OIL.
CENTRE LINE OF BEARING GUDGEON, BOTTOM GUDGEON & MAIN PIECE TO BE IN A STRAIGHT LINE & SQUARE TO BASE LINE
WEIGHT OF FRAME TO BE PAINTED ON BEFORE DISPATCH

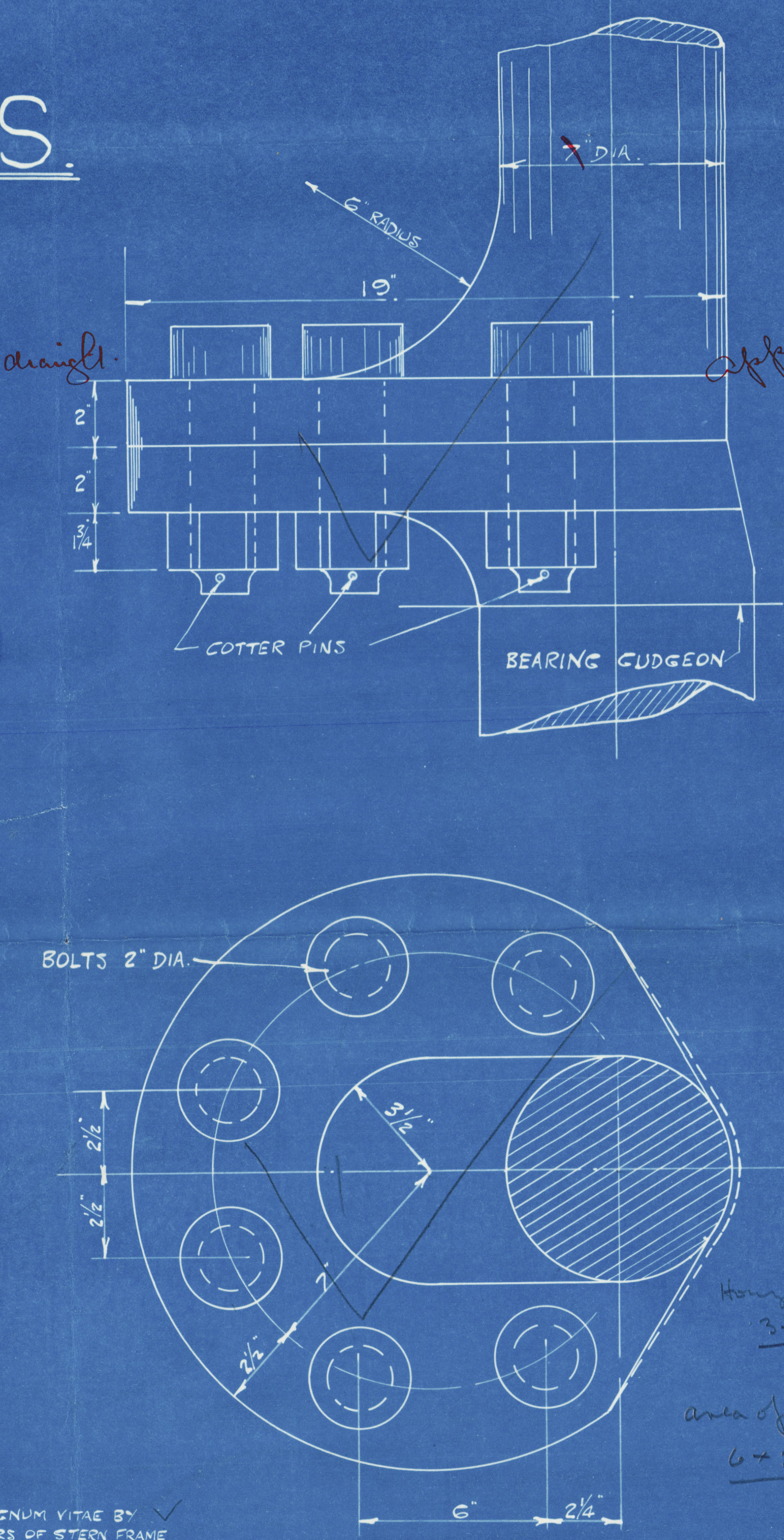
RUDDER FRAME: 5/16" BRASS LINER TO BE CAST & GROOVED GROOVES TO BE 5/8" WIDE & 1/8" DEEP. STOCK TO BE INCREASED 3/4" IN DIA. IN WAY OF ARMS. THE INCREASE TO BE UNIFORM & EXTEND ABOVE AND BELOW EACH ARM EXCEPT THE BOTTOM OF THE LOWER ARM FOR A DISTANCE OF 1½" & THEN TAPERED OVER A SIMILAR DISTANCE INTO THE NORMAL DIA.

STERN FRAME: SPECIAL CARE TO BE TAKEN THAT HEIGHT OF CENTRE OF SHAFT ABOVE BASE LINE IS CORRECT & THICKNESS OF BOTTOM PIECE NOT EXCEEDED.

ANY ALTERATIONS MADE TO BE NOTIFIED TO
MESSRS. SMITHS DOCK Co LTD.
KEYWAYS TO BE ACCURATELY CUT TO DIMENSIONS GIVEN.

DETAIL OF COUPLING

SCALE 3" = 1 FOOT.

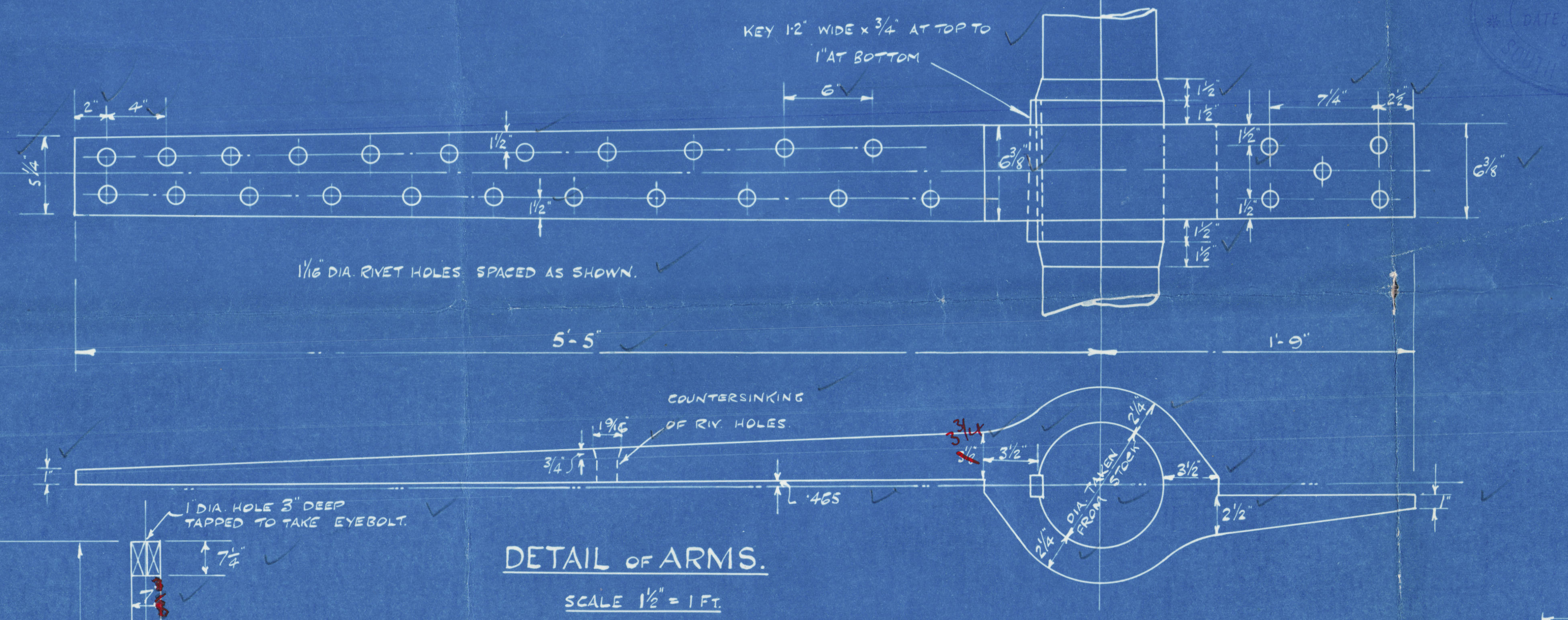

7" DIA.
6" RADIUS
19"
2"
2"
1¾"
COTTER PINS
BEARING GUDGEON
BOLTS 2" DIA.
3½"
2½"
2½"
2½"
6"
2¼"

Flange ·25×7 = 1¾" offered 2"

S = 7.

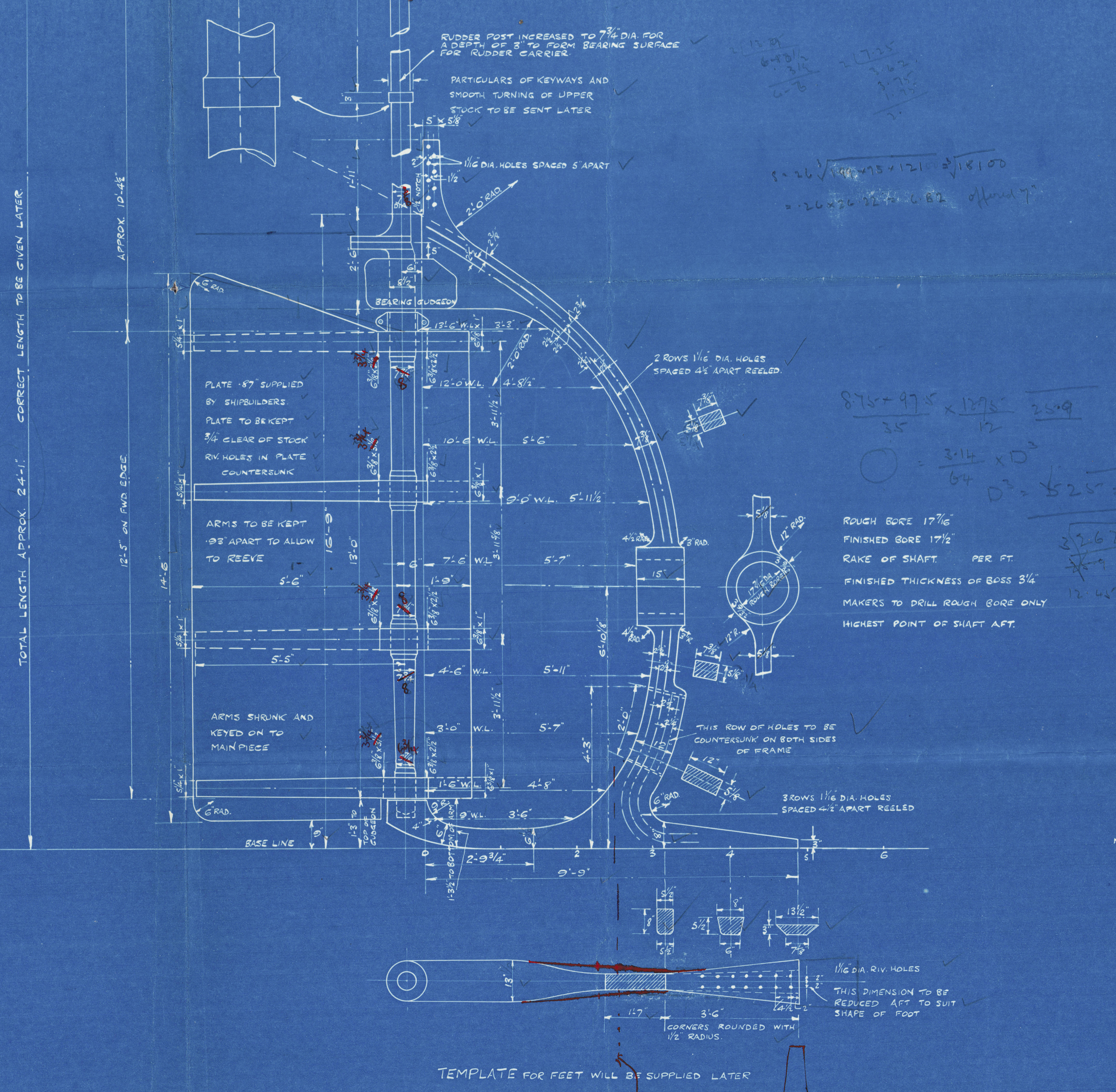
Horizontal Coupling
$\frac{3\times7^3}{M} = 14·7$

area of 6 @ 2" bolts
$\frac{6\times2^2\times\pi}{4} = 18·84$


KEY 1·2" WIDE x 3/4" AT TOP TO 1" AT BOTTOM
2"
4"
6"
1½"
5¼"
7½"
6¾"
1 1/16" DIA. RIVET HOLES SPACED AS SHOWN.
5'-5"
1'-9"
COUNTERSINKING OF RIV. HOLES
1"
1 DIA. HOLE 3" DEEP TAPPED TO TAKE EYEBOLT.

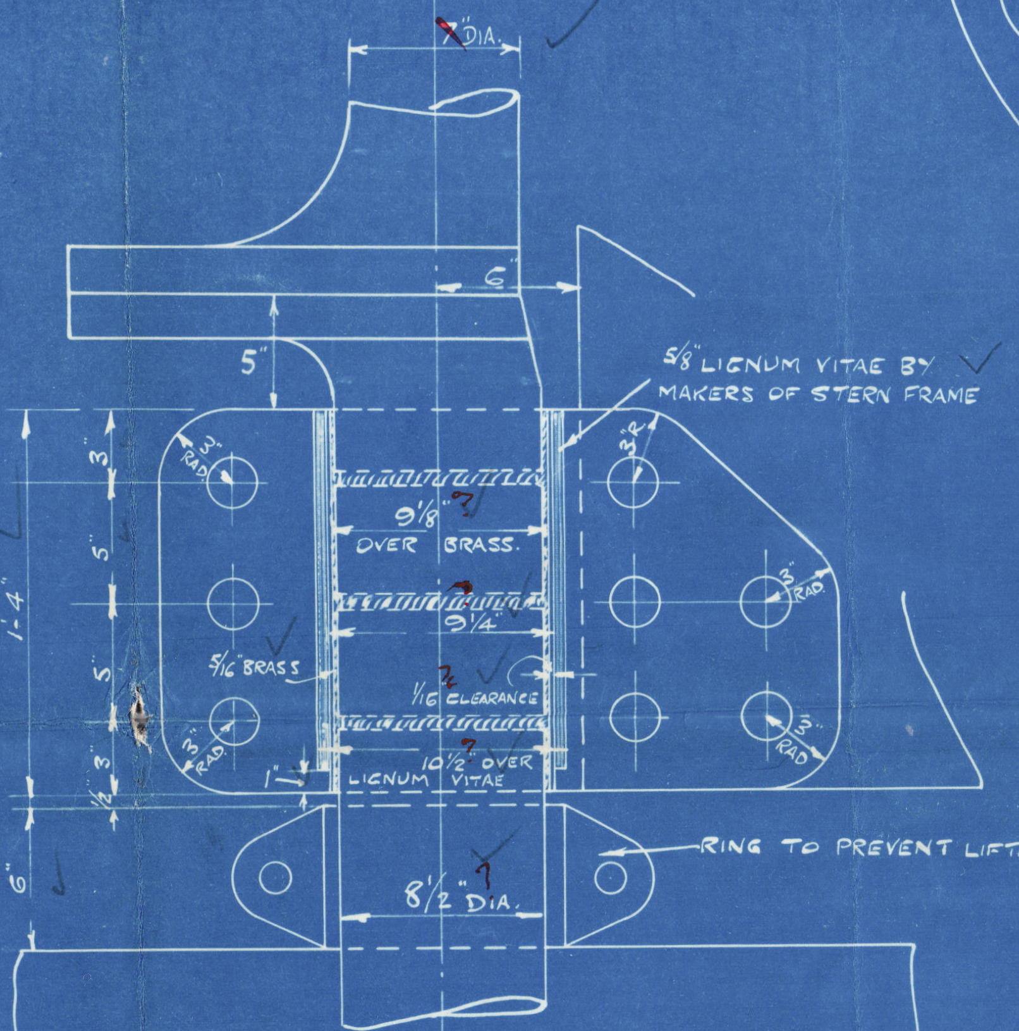
DETAIL OF ARMS.

SCALE 1½" = 1 FT

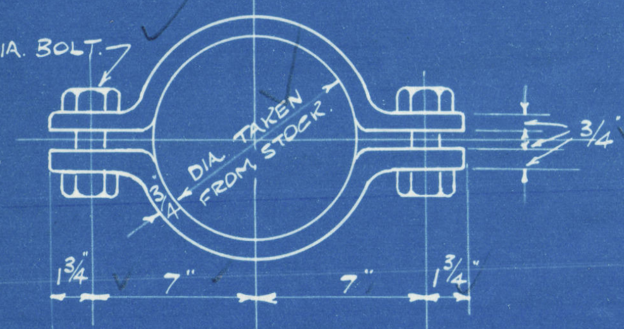

RUDDER POST INCREASED TO 7¾" DIA. FOR A DEPTH OF 3" TO FORM BEARING SURFACE FOR RUDDER CARRIER
PARTICULARS OF KEYWAYS AND SMOOTH TURNING OF UPPER STOCK TO BE SENT LATER
1 1/16 DIA. HOLES SPACED 5" APART
BEARING GUDGEON
PLATE ·87 SUPPLIED BY SHIPBUILDERS PLATE TO BE KEPT 3/4 CLEAR OF STOCK RIV. HOLES IN PLATE COUNTERSUNK
ARMS TO BE KEPT ·95 APART TO ALLOW TO REEVE
ARMS SHRUNK AND KEYED ON TO MAIN PIECE
2 ROWS 1 1/16 DIA. HOLES SPACED 4½ APART REELED
THIS ROW OF HOLES TO BE COUNTERSUNK ON BOTH SIDES OF FRAME
3 ROWS 1 1/16 DIA. HOLES SPACED 4½ APART REELED
12'-0" W.L.
10'-6" W.L.
9'-0" W.L.
7'-6" W.L.
6'-0" W.L.
4'-6" W.L.
3'-0" W.L.
1'-6" W.L.
BASE LINE
TOTAL LENGTH APPROX. 24'-1" CORRECT LENGTH TO BE GIVEN LATER
APPROX. 10'-4½"
12'-5" ON FWD EDGE
14'-6"
2'-9¾"
9'-9"
ROUGH BORE 17 7/16
FINISHED BORE 17½
RAKE OF SHAFT PER FT.
FINISHED THICKNESS OF BOSS 3¼"
MAKERS TO DRILL ROUGH BORE ONLY
HIGHEST POINT OF SHAFT AFT.
1 1/16 DIA. RIV. HOLES
THIS DIMENSION TO BE REDUCED AFT TO SUIT SHAPE OF FOOT
CORNERS ROUNDED WITH 1/2" RADIUS.

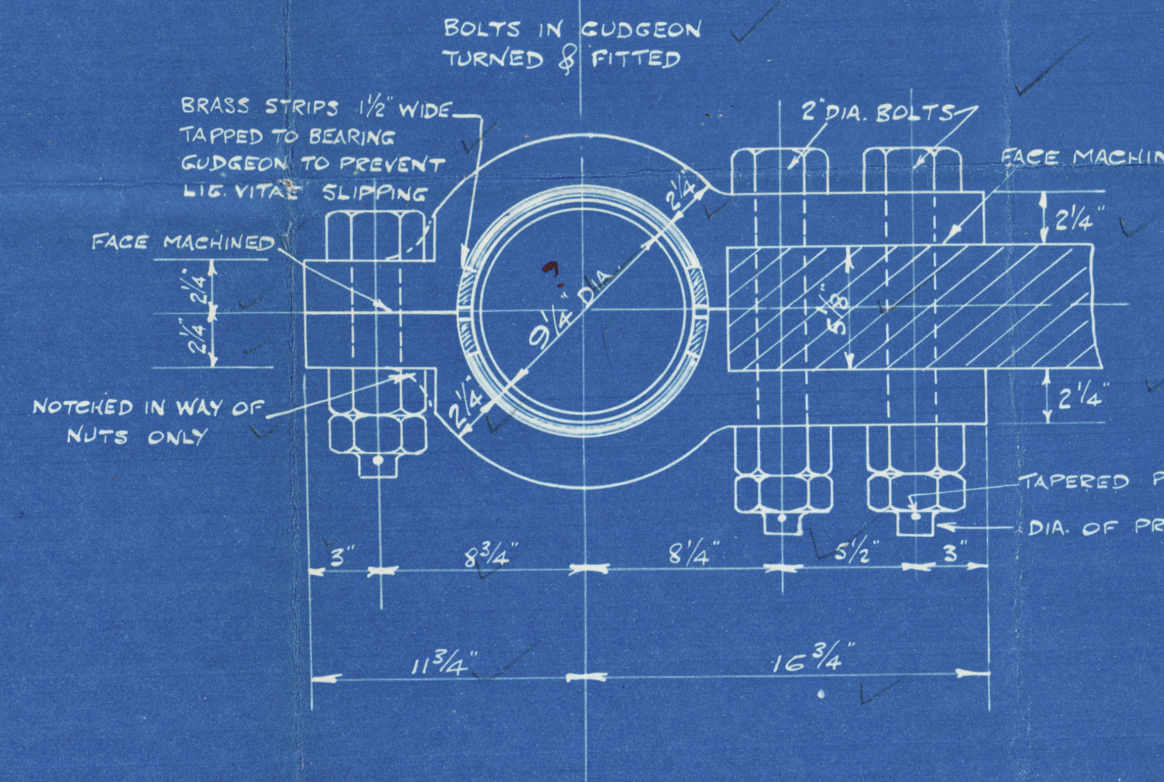
TEMPLATE FOR FEET WILL BE SUPPLIED LATER

This dimension increased so that transverse strength of Section will not be less than at Gudg.


5/8" LIGNUM VITAE BY MAKERS OF STERN FRAME
9½" OVER BRASS
10½" OVER LIGNUM VITAE
8½" DIA.
RING TO PREVENT LIFTING

DETAIL OF RING TO PREVENT LIFTING


1¼ DIA. BOLT
7"
7"

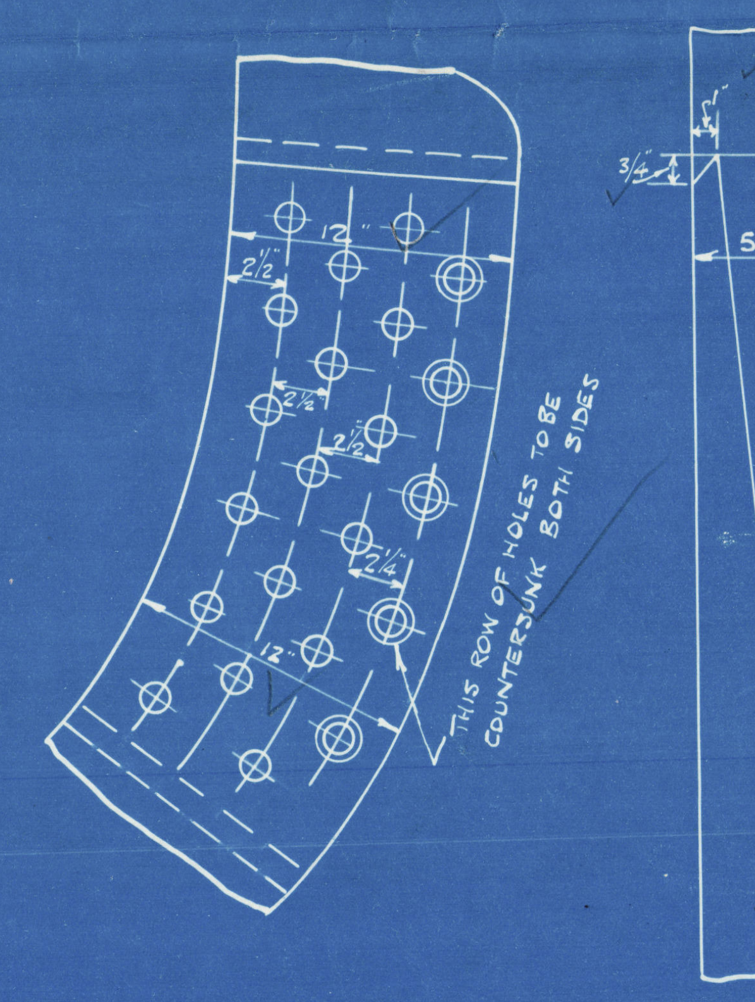

BOLTS IN GUDGEON TURNED & FITTED
BRASS STRIPS 1½ WIDE TAPPED TO BEARING GUDGEON TO PREVENT LIG. VITAE SLIPPING
2" DIA. BOLTS
FACE MACHINED
FACE MACHINED
NOTCHED IN WAY OF NUTS ONLY
TAPERED PIN
DIA. OF PROJECTION 1½"
11¾"
16¾"

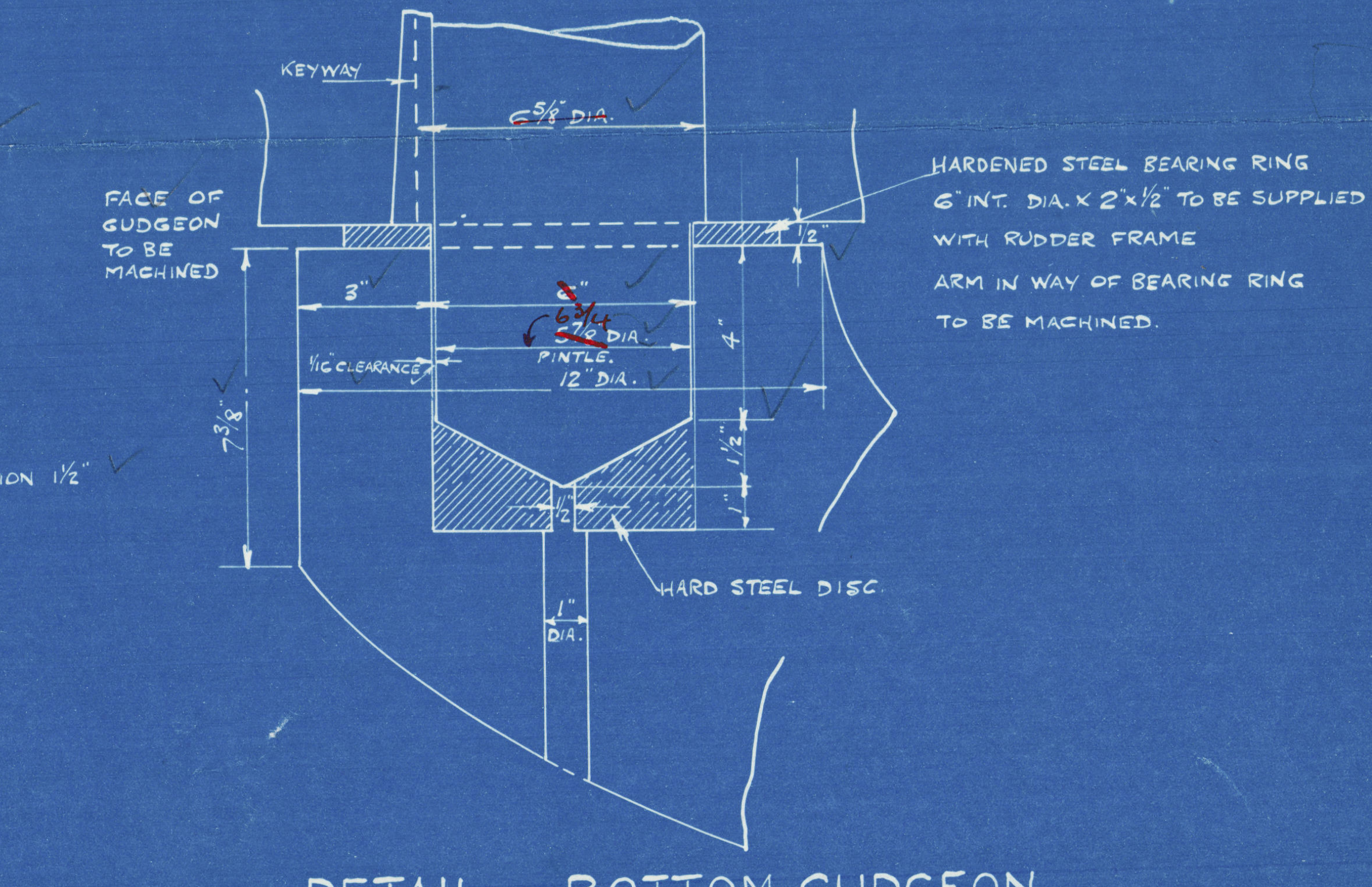
DETAIL OF BEARING AT GUDGEON

1½" = 1 FOOT.

DETAIL OF SCARPH

SCARPH TO BE MACHINED


THIS ROW OF HOLES TO BE COUNTERSUNK BOTH SIDES
5½"
2'-0"


KEYWAY
6¾" DIA.
FACE OF GUDGEON TO BE MACHINED
PINTLE
HARDENED STEEL BEARING RING 6" INT. DIA. x 2" x 1½" TO BE SUPPLIED WITH RUDDER FRAME
ARM IN WAY OF BEARING RING TO BE MACHINED.
HARD STEEL DISC

DETAIL OF BOTTOM GUDGEON.

004900-004905-0122